## **Editorial**

## **Debunk the myths: Oncologic misconceptions**

Worldwide cancer statistics estimated 14.1 million new cancer cases and 8.2 million cancer related deaths in 2012<sup>1</sup>. Globally the most frequently diagnosed cancers included the lung (1.8 million, 13.0% of the total), breast (1.7 million, 11.9%) and colorectal (1.4 million, 9.7%). The most common causes of death were cancers of the lung (1.6 million, 19.4% of the total), liver (0.8 million, 9.1%) and stomach (0.7 million, 8.8%). It has been predicted that a substantive increase to 19.3 million new cancer cases per year by 2025, would be due to growth and ageing of the global population. More than half of all cancers (56.8%) and cancer deaths (64.9%) in 2012 occurred in less developed regions of the world, and these proportions have been indicated to increase further by 2025<sup>1</sup>.

Cancer deaths in India have been estimated to be 395400 (71%) in people aged 30-69 yr (200100 men and 195300 women). The three most prevalent fatal cancers were oral [lip and pharynx, 45800 (22.9%)], stomach [25200 (12.6%)] and lung [including trachea and larynx, 22900 (11.4%)] in men, and cervical [33400 (17.1%)], stomach [27500 (14.1%)], and breast [19900 (10.2%)] in women. Tobacco related cancers represented 42.0 per cent (84000) of male and 18.3 per cent (35700) of female cancer deaths and there were twice as many deaths from oral cancers then that of lung cancers<sup>2</sup>.

Under such circumstances when India along with many other nations of the world is on the verge of a disastrous cancer epidemic, cancer awareness and prevention should be the prime focus. In view of this, the World Cancer Day this year is an initiative to raise awareness against cancer and to encourage efforts in prevention, detection and treatment. United Nations in 2011 had adopted a World Cancer Declaration which

included an important issue to "dispel damaging myths and misconceptions" about the disease.

Cancer is a disease where myth can bring an end to a life. Undoubtedly, cancer is still a dreadful challenge for oncologists and researchers but that does not stop us from combating this killer disease. Diagnosis of cancer does not indicate that the person is suffering from an incurable disease where death is inevitable. Therefore, the need of the hour is to emphasize on debunking innumerable myths and misconceptions associated with cancer.

*Myth*: Cancer is always fatal. Though there has been a sharp rise in cancer related mortality, but improved treatment options have made it possible for thousands of patients to get rid of the disease.

Myth: Cancer can be contagious. Apart from cervical cancer (caused by human papilloma virus)<sup>3</sup> and liver cancer (caused by hepatitis B and C virus)<sup>4</sup>, none of the other forms of cancer are contagious. Blood transfusion, shared needles and un-protected sex are the common modes responsible for the spread of these cancers.

Myth: Pollution is a greater risk for lung cancer than smoking. Reports indicate a 12 per cent greater risk of lung cancer in urban residents of a polluted city, but the data consistently marked smoking as the leading cause of the disease. It has been estimated that 80 to 90 per cent of lung cancer deaths can be attributed to smoking<sup>5</sup>.

*Myth*: Lung cancer is prevalent only among smokers. Smoking undoubtedly increases the risk of lung cancer, but at the same time the other pertinent factors like heavy exposure to asbestos, radon, uranium, arsenic, genetic pre-disposition, passive smoking and lung scarring from any prior illness can all lead to lung cancer.

Myth: Light or mild cigarettes are less injurious to health. Light or mild cigarettes eventually turn out to be more dangerous due to the tendency of the smokers to drag the duration of smoking. Cancer risk can be reduced only by quitting smoking.

*Myth*: Injuries can cause cancer later in adulthood. Most cancers are a consequence of accumulation of genetic mutations and are independent of physical injuries.

Myth: There are no measures for reducing cancer risk. Abstaining from tobacco products, eating healthy, exercising, using protection during sexual intercourse, using sunscreen and avoiding intravenous drugs, are some of the preventive measures which effectively reduces the risk of cancer.

*Myth*: Biopsies as well as surgery aggravates cancer. Biopsies are the effective diagnostic tools for detection of cancer. Avoiding biopsies may lead to late detection and poor prognosis of the disease process.

*Myth*: Every abnormal growth is cancerous. Benign tumours do not possess the capability to metastasize. In case of any clinical problem, these can be surgically removed.

Myth: Men are not liable to have breast cancer and mastectomy is a must for women diagnosed with breast cancer. The chances of breast cancer among men cannot be completely eradicated as 1 per cent of breast cancer cases have been reported in men<sup>6</sup>. Most of the men are unaware of this risk of cancer. Breast preserving treatment has made it possible to preserve the breast in women and treat the cancer effectively in certain cases.

Myth: Cancer research is fruitless. Oncology, the study and management of cancer, is the fastest evolving branch of modern medicine today. Though the cause of cancer is still an enigma, the advanced interdisciplinary research has increased the scope of fighting the disease. Cancer research has brought in a number of new molecules which has helped to blend the targeted therapy, hormone therapy along with better surgical options, radiotherapy and chemotherapy to improve the disease free survival of the cancer patients.

Myth: Cancer is a hereditary disease. Genetic predisposition is an important factor which contributes towards development of cancer, but all cancers are not liable to develop from genetic inheritance<sup>7</sup>. Only 5-10 per cent of all cancers are attributed to genetic defects and the remaining 90-95 per cent have their strings attached to environment and lifestyle.

Myth: Nausea, sickness and pain are part and parcel of cancer treatment. Individual variation exists regarding response to a particular treatment regimen. Recent advancements with antiemetics have made it possible to reduce the side effects like nausea and sickness. Pain relieving medications and exercises provide better quality of life to the patients.

Myth: Clinical trials are by nature a risky undertaking. Clinical trials are closely monitored by the doctors and caregivers, as well as an Institutional Review Board assigned to each trial and details are carefully documented.

Myth: Clinical trials are highly experimental and patients are treated like "guinea pigs". Clinical trials generally incorporate the best available medicine and then add to it or adjust it to observe if enhancements can be made to improve the quality of life of patients or their response rates.

*Myth*: Sugars feed cancer. Sugar is not responsible for the spread of cancer. Excess intake of sugar can lead to obesity and, therefore, can enhance the risk of cancer<sup>8</sup>. Naturally occurring sugars like those found in fruits, vegetables and whole grains are all needed to help maintain muscle and weight during cancer treatment and have been shown to help fight cancer.

Myth: Positive attitude is enough to cure cancer. Positive attitude is always desirable during cancer treatment but this cannot be the only option for cancer cure, since proper medication and therapy are the foremost priority in case of cancer patients.

Myth: There is no need to talk about cancer. It is always good to have an open and frank discussion about cancer, which might help to create awareness, therefore, improving outcomes at an individual, community and policy level.

Myth: One having cancer treatment cannot live at home, work or go about usual activities. Very often patients need to get admitted to a hospital for treatment. At times it may be helpful to travel to a specialty medical centre for treatment. The truth is that many people with cancer may be treated on an outpatient basis. A great deal of effort is ongoing to make it easier for cancer patients to live a normal life during their treatment.

Myth: Supernatural factors and ill fate influence cancer. Very often people attribute an illness to supernatural factor, ill fate and witch craft with the occurrence of cancer. These affect the well being of the patients

due to bereavement in decision making and delayed medical care.

Not only myths, social taboos also are an obstacle in dealing with cancer. A diagnosis of cancer is a life-changing event commonly evoking feelings of shock, fear, anger, sadness, loneliness and anxiety. Cancer remains taboo and people with cancer are even subjected to stigma and discrimination that may stop them from admitting that they have cancer. Negative public concept of cancer can perpetuate a cycle of fear and misinformation that hinders raising awareness about cancer prevention and the importance of early detection.

Lack of awareness is the root cause of the oncologic misconceptions. Cancer awareness programmes are foremost initiatives which are needed to debunk these myths. In a pilot survey conducted by Chittaranjan National Cancer Institute, Kolkata, India, on 900 people to assess the level of cancer awareness only 8 per cent had experienced any cancer awareness programme conducted by any organization, 37 per cent had heard cancer awareness programme on All India Radio, 36 per cent had viewed awareness programme on Doordarshan / private television channels, 34 per cent had read cancer awareness articles and only 13 per cent has seen cancer awareness posters and hoardings (unpublished findings). The results envisaged a great lacuna in cancer awareness prevailing with the common mass.

The oncologic myths can be managed with effective palliative care services which would identify the misconceptions regarding cancer and help the patients as well as their family members to cope with the disease. Appropriate communication through trained social workers and health workers is an absolute necessity which would create a liaison between health care providers and the community. According to the World Health Organization, majority of the cancer cases are detected only in the advanced stages, when they are untreatable<sup>9</sup>. This has led to devastating consequences

especially in developing countries. Educating people and spreading awareness against cancer and more organized network of cancer screening clinics would help to diagnose even an asymptomatic patient at an early stage. An early diagnosis of cancer and proper medical intervention would certainly lead to better prognosis and enhance the chances of disease free survival.

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## References

- GLOBOCAN 2012: Estimated cancer incidence, mortality and prevalence worldwide in 2012. Available from: http:// globocan.iarc.fr/Default.aspx, accessed on January 14, 2014.
- Dikshit R, Gupta PC, Ramasundarahettige C, Gajalakshmi V, Aleksandrowicz L, Badwe R, et al. Million Death Study Collaborators. Cancer mortality in India: a nationally representative survey. Lancet 2012; 379: 1807-16.
- Subramanya D, Grivas PD. HPV and cervical cancer: updates on an established relationship. *Postgrad Med* 2008; *120*: 7-13.
- Forner A, Llovet JM, Bruix J. Hepatocellular carcinoma. *Lancet* 2012; 379: 1245-55.
- Available from: http://www.cancer.gov/cancertopics/tobacco/ smoking, accessed on January 11, 2014.
- Madeira M, Mattar A, Passos RJ, Mora CD, Mamede LH, Kishino VH, et al. A case report of male breast cancer in a very young patient: What is changing? World J Surg Oncol 2011; 9:16.
- Risch N. The genetic epidemiology of cancer: interpreting family and twin studies and their implications for molecular genetic approaches. *Cancer Epidemiol Biomarkers Prev* 2001; 10: 733-41.
- Bray GA, Nielsen SJ, Popkin BM. Consumption of highfructose corn syrup in beverages may play a role in the epidemic of obesity. Am J Clin Nutr 2004; 79: 537-43.
- Availablefrom: http://www.searo.who.int/entity/noncommunicable\_ diseases/advocacy/world\_cancer\_day\_2014/en/index.html, accessed on January 14, 2014.